



STATE OF MARYLAND

DMMH

Maryland Department of Health and Mental Hygiene
201 W. Preston Street, Baltimore, Maryland 21201

Martin O'Malley, Governor – Anthony G. Brown, Lt. Governor – John M. Colmers, Secretary

Office of Preparedness & Response

Sherry Adams, R.N., C.P.M., Director

Isaac P. Ajit, M.D., M.P.H., Deputy Director

December 23, 2009

Public Health & Emergency Preparedness Bulletin: # 2009:50 Reporting for the week ending 12/19/09 (MMWR Week #50)

CURRENT HOMELAND SECURITY THREAT LEVELS

National: Yellow (ELEVATED) *The threat level in the airline sector is Orange (HIGH)
Maryland: Yellow (ELEVATED)

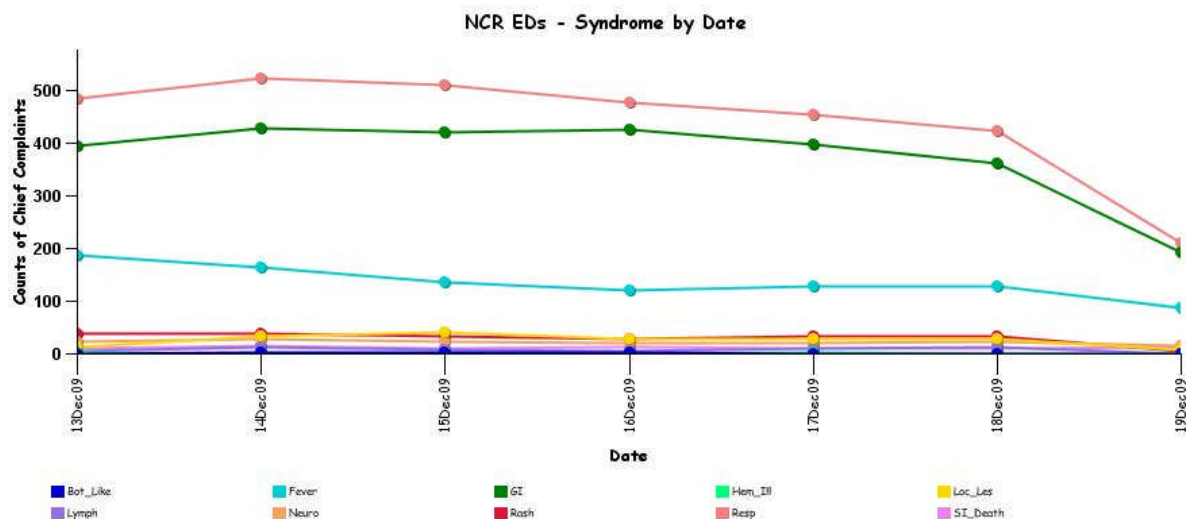
SYNDROMIC SURVEILLANCE REPORTS

ESSENCE (Electronic Surveillance System for the Early Notification of Community-based Epidemics):

Graphical representation is provided for all syndromes, excluding the "Other" category, all age groups, and red alerts are circled.

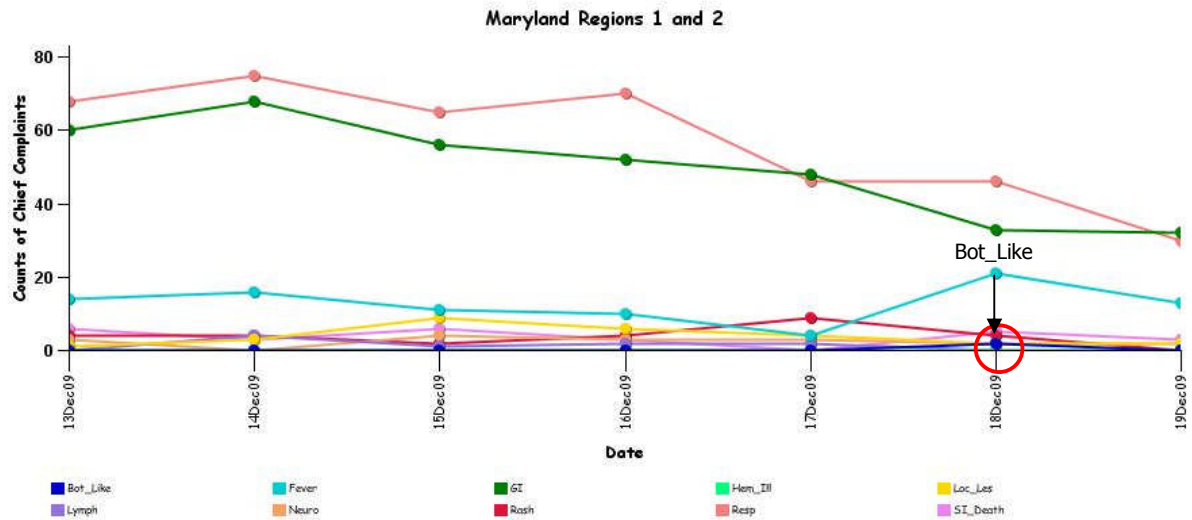
Note: ESSENCE – ANCR Spring 2006 (v 1.3) now uses syndrome categories consistent with CDC definitions.

Overall, no suspicious patterns of illness were identified. Track backs to the health care facilities yielded no suspicious patterns of illness.

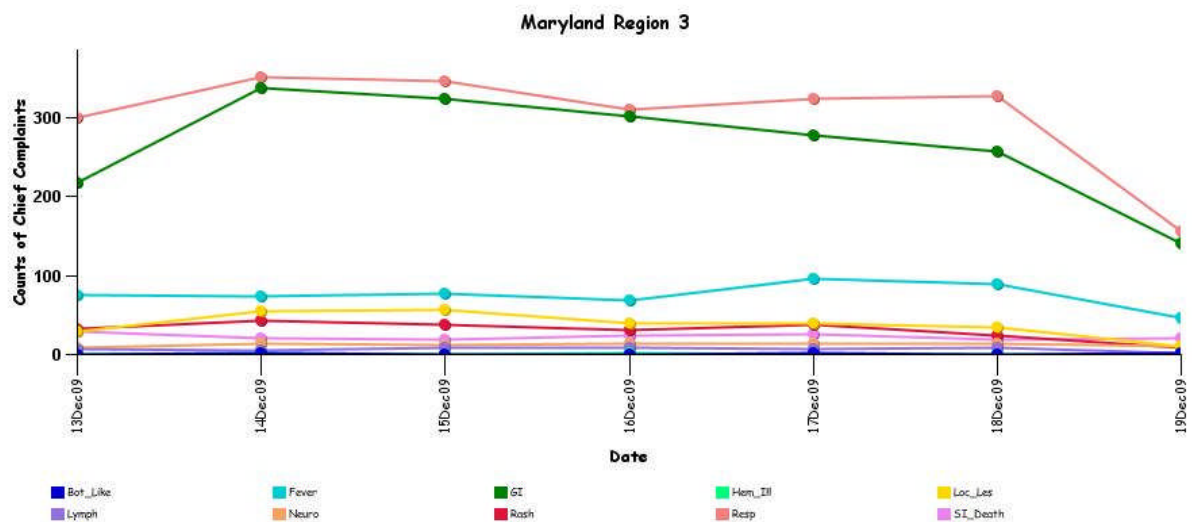


* Includes EDs in all jurisdictions in the NCR (MD, VA, and DC) reporting to ESSENCE

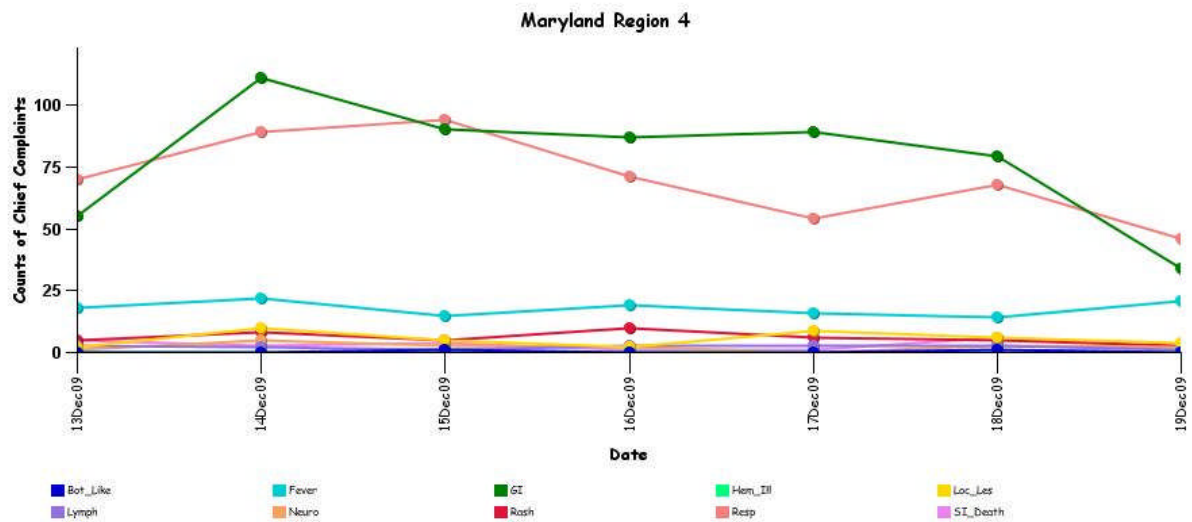
MARYLAND ESSENCE:



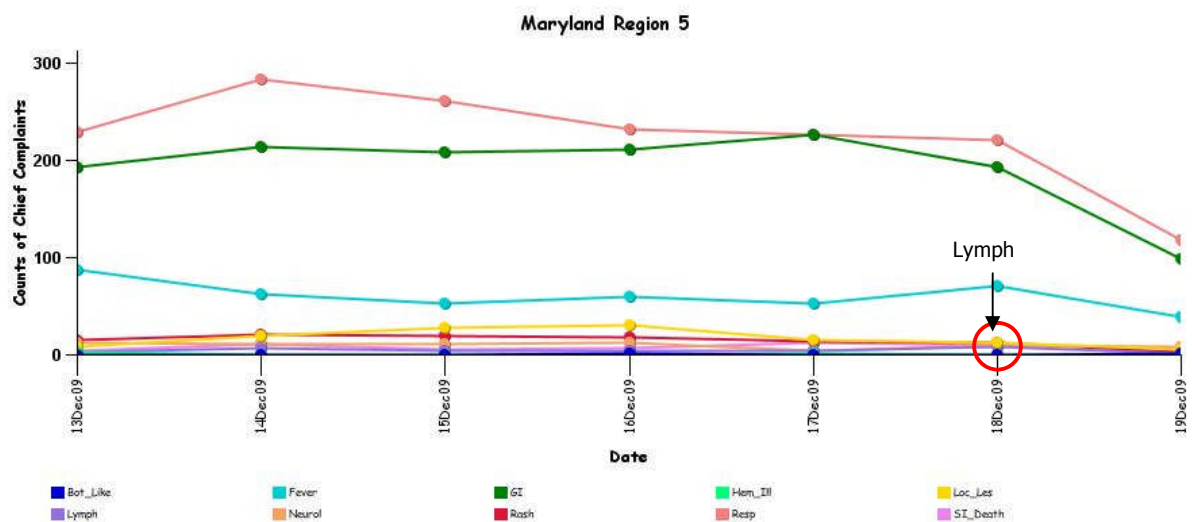
* Region 1 and 2 includes EDs in Allegany, Frederick, Garrett, and Washington counties reporting to ESSENCE



* Region 3 includes EDs in Anne Arundel, Baltimore city, Baltimore, Carroll, Harford, and Howard counties reporting to ESSENCE



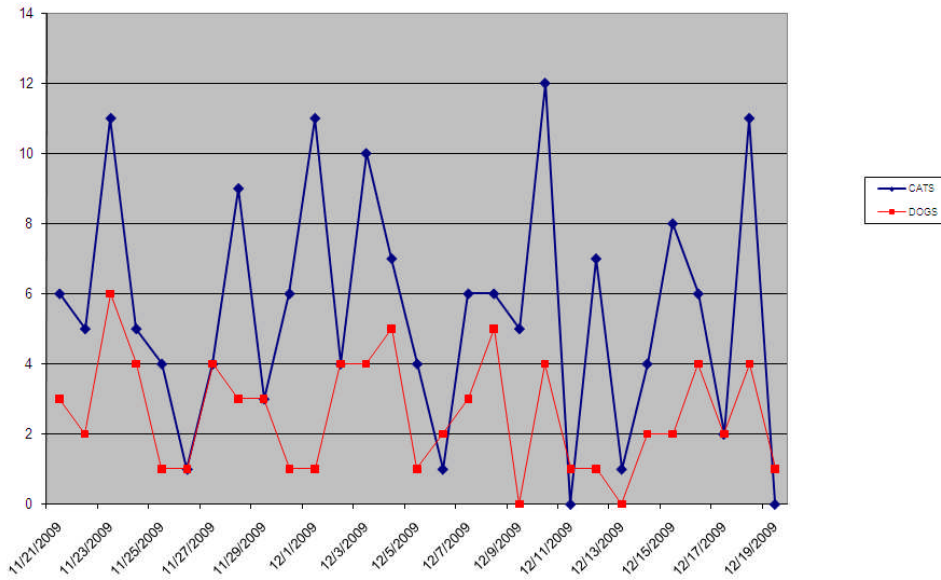
* Region 4 includes EDs in Cecil, Dorchester, Kent, Somerset, Talbot, Wicomico, and Worcester counties reporting to ESSENCE



* Region 5 includes EDs in Calvert, Charles, Montgomery, Prince George's, and St. Mary's counties reporting to ESSENCE

BALTIMORE CITY SYNDROMIC SURVEILLANCE PROJECT: No suspicious patterns in the medic calls, ED Syndromic Surveillance and the animal carcass surveillance. Graphical representation is provided for animal carcass surveillance 311 data.

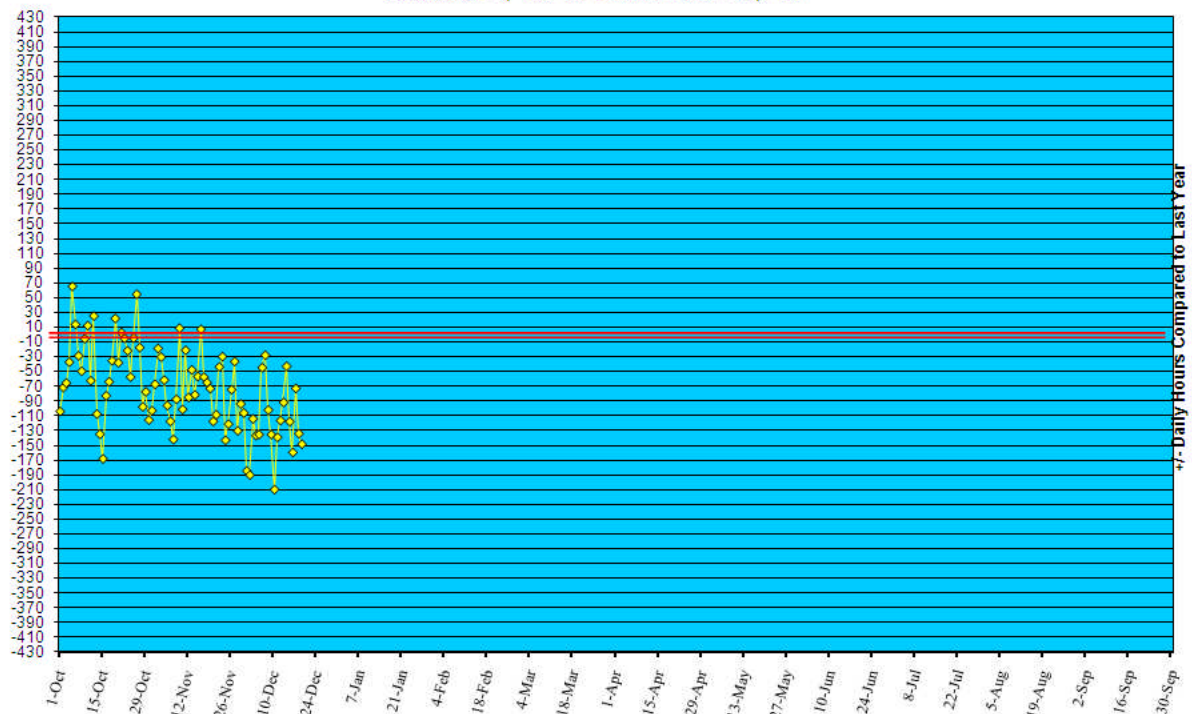
Dead Animal Pick-Up Calls to 311



REVIEW OF EMERGENCY DEPARTMENT UTILIZATION

YELLOW ALERT TIMES (ED DIVERSION): The reporting period begins 10/01/09.

**Statewide Yellow Alert Comparison
Daily Historical Deviations
October 1, '09 to December 19, '09**



REVIEW OF MORTALITY REPORTS

Office of the Chief Medical Examiner: OCME reports no suspicious deaths related to an emerging public health threat for the week.

MARYLAND TOXIDROMIC SURVEILLANCE

Poison Control Surveillance Monthly Update: Investigations of the outliers and alerts observed by the Maryland Poison Center and National Capital Poison Center in November 2009 did not identify any cases of possible public health threats.

REVIEW OF MARYLAND DISEASE SURVEILLANCE FINDINGS

COMMUNICABLE DISEASE SURVEILLANCE CASE REPORTS (confirmed, probable and suspect):

Meningitis:	<u>Aseptic</u>	<u>Meningococcal</u>
New cases (Dec 13- Dec 19, 2009):	08	0
Prior week (Dec 06- Dec 12, 2009):	28	0
Week#50, 2008 (Nov 07– Dec 13, 2008):	14	0

OUTBREAKS: 1 outbreak was reported to DHMH during MMWR Week 50 (December 13- December 19, 2009):

1 Respiratory illness outbreak

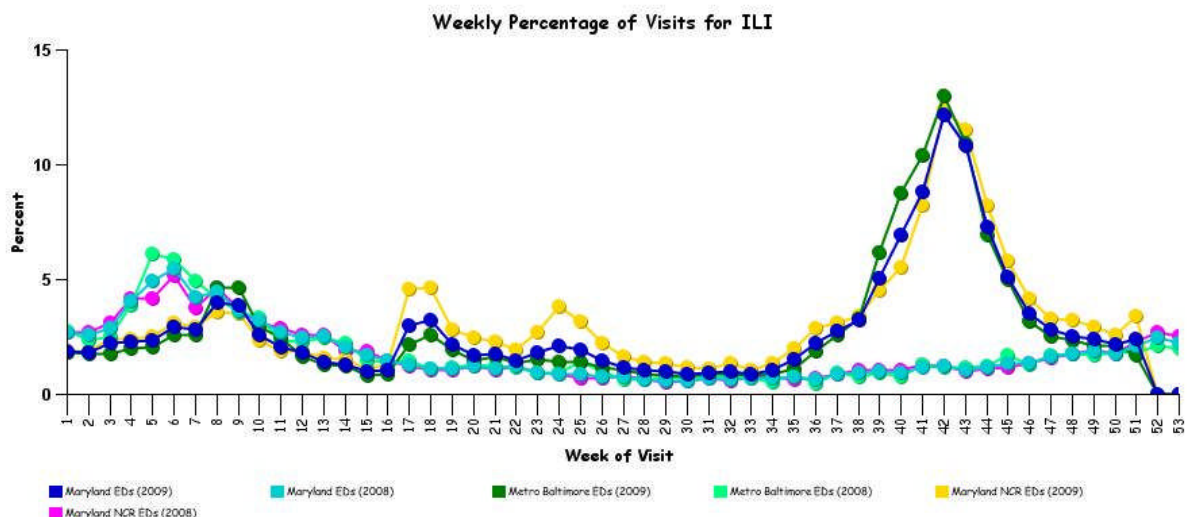
1 outbreak of INFLUENZA/PNEUMONIA at a Nursing Home

MARYLAND INFLUENZA STATUS: Influenza activity in Maryland for Week 50 is LOCAL.

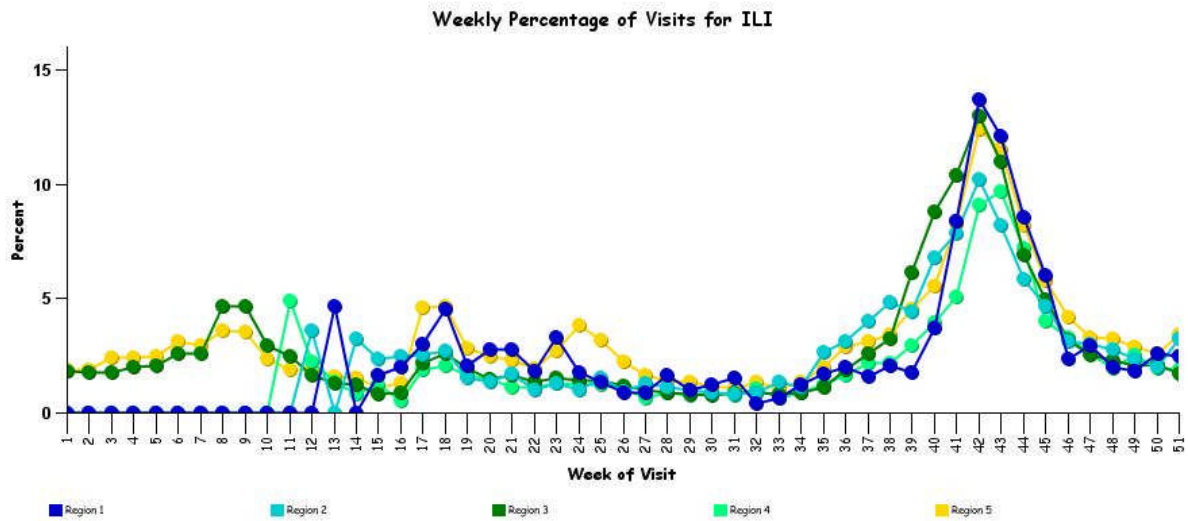
SYNDROMIC SURVEILLANCE FOR INFLUENZA-LIKE ILLNESS

Graphs show the percentage of total weekly Emergency Department patient chief complaints that have one or more ICD9 codes representing provider diagnoses of influenza-like illness. These graphs do not represent confirmed influenza.

Graphs show proportion of total weekly cases seen in a particular syndrome/subsyndrome over the total number of cases seen. Weeks run Sunday through Saturday and the last week shown may be artificially high or low depending on how much data is available for the week.



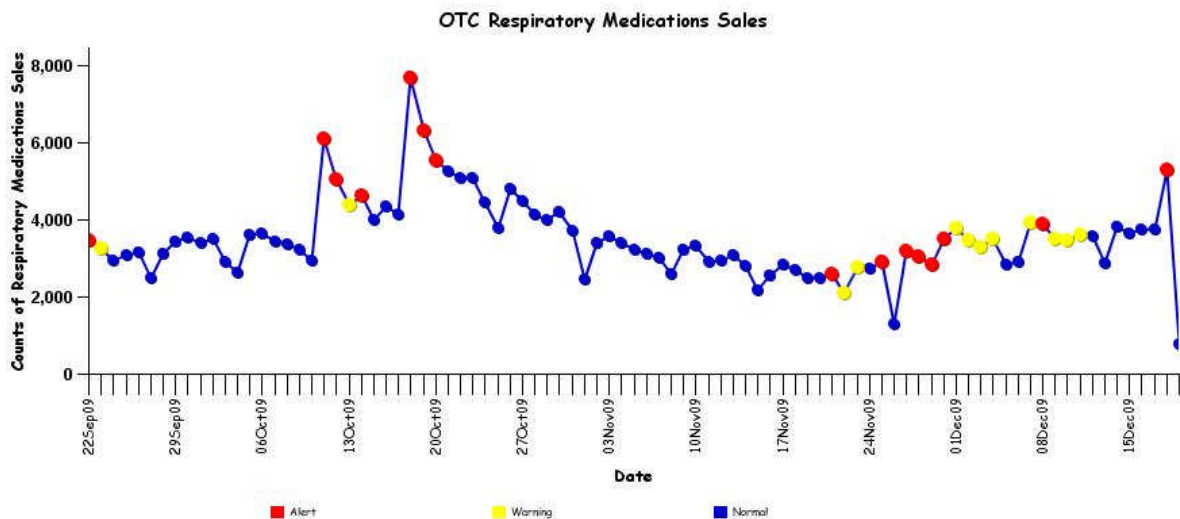
* Includes 2008 and 2009 Maryland ED visits for ILI in Metro Baltimore (Region 3), Maryland NCR (Region 5), and Maryland Total



*Includes 2009 Maryland ED visits for ILI in Region 1, 2, 3, 4, and 5
 2009 data for these regions are depicted separately to establish baselines, due to the addition of new hospitals in these regions.

OVER-THE-COUNTER (OTC) SALES FOR RESPIRATORY MEDICATIONS:

Graph shows the daily number of over-the-counter respiratory medication sales in Maryland at a large pharmacy chain.



PANDEMIC INFLUENZA UPDATE:

WHO Pandemic Influenza Phase: Phase 6: Characterized by community level outbreaks in at least one other country in a different WHO region in addition to the criteria defined in Phase 5. Designation of this phase will indicate that a global pandemic is under way. Definition of Phase 5 is characterized by human-to-human spread of the virus into at least two countries in one WHO region. While most countries will not be affected at this stage, the declaration of Phase 5 is a strong signal that a pandemic is imminent and that the time to finalize the organization, communication, and implementation of the planned mitigation measures is short.

US Pandemic Influenza Stage: Stage 0: New domestic animal outbreak in at-risk country

****More information regarding WHO Pandemic Influenza Phase and US Pandemic Influenza Stage can be found at:**
[http://preparedness.dhmd.maryland.gov/Docs/PandemicInfluenza/PandemicInfluenzaResponseAnnex\(Vers7.2\).pdf](http://preparedness.dhmd.maryland.gov/Docs/PandemicInfluenza/PandemicInfluenzaResponseAnnex(Vers7.2).pdf)

AVIAN INFLUENZA-RELATED REPORTS:

WHO update: As of December 18, 2009, the WHO-confirmed global total of human cases of H5N1 avian influenza virus infection stands at 446, of which 263 have been fatal. Thus, the case fatality rate for human H5N1 is about 59%.

AVIAN INFLUENZA, HUMAN (CAMBODIA): 18 Dec 2009, The Ministry of Health of Cambodia has announced a new confirmed case of human infection with the H5N1 avian influenza virus. A 57 year old man, from Ponhea Kreak District, Kampong Cham Province, developed symptoms on 11 Dec 2009. The case was admitted to Kampong Cham Provincial Hospital on 16 Dec 2009, where he received treatment. He is in a stable condition. The presence of the H5N1 virus was confirmed by the National Influenza Centre, the Institut Pasteur du Cambodge. A team led by the Ministry of Health is conducting field investigations into the source of his infection. Of the 9 cases confirmed to date in Cambodia, 7 have been fatal.

H1N1 INFLUENZA (Swine Flu):

INFLUENZA PANDEMIC (H1N1) 2009, (MIDDLE EAST): 15 Dec 2009, Egypt's Health Ministry reported on Monday [14 Dec 2009] 3 more deaths from pandemic (H1N1) 2009 virus infection, or swine flu, bringing the death toll in the country to 59. Health officials are worried that the winter months could bring a higher number of infections and deaths due to the cold. The Ministry said a 42 year old man died of the virus in Beheira, 100 miles [160 km] north of Cairo, adding that the man suffered from severe dyspnea and cirrhosis. Ministry spokesman Abdel Rahman Shahine said a 48 year old woman also died of the virus in Beni Suef, 90 miles [145 km] south of the Egyptian capital, adding that she had suffered from pneumonia and dyspnea. The 3rd case reported was of a 27 year old pregnant woman from Minya, 175 miles [280 km] south of Cairo. Since the virus first appeared in Egypt last June [2009], the country has reported more than 4700 cases. Amr Kandil, under secretary of the Ministry of Health for Preventive Affairs, stressed that the virus has not mutated and said that the high rate of infection per day is not indicative of a mutation. However, Awad Mahgour, director of Communicable Diseases at the World Health Organization stressed that the virus has already mutated in a number of countries, "but slowly and in a restricted context." [Presumably the WHO spokesman is referring to the sporadic appearance of oseltamivir-resistant virus.] Meanwhile, WHO announced the results of their research, which ended last Friday evening [11 Dec 2009], confirming that there is no clear evidence that the anti-viral drug Tamiflu prevents complications of diseases, such as the seasonal flu or pneumonia, among the infected. WHO said in a statement that it is still recommending the use of Tamiflu in the treatment of those "separately infected with swine influenza, or who continue to have symptoms for 3 days, or if their health had deteriorated." The global health organization [WHO] added that persons in good health, but infected with swine flu, do not need Tamiflu, since the vast majority of swine flu patients have recovered without any kind of medical care.

INFLUENZA (H1N1) 2009 , INDIGENOUS PEOPLES: 13 Dec 2009, Indigenous populations from Australia, Canada, and New Zealand have been found to have a 3 to 8 times higher rate of hospitalization and death associated with infection with the 2009 pandemic influenza A (H1N1) virus (1). In October 2009, 2 U.S. states (Arizona and New Mexico) observed a disproportionate number of deaths related to H1N1 among American Indian/Alaska Natives (AI/ANs). These observations, plus incomplete reporting of race/ethnicity at the national level, led to formation of a multidisciplinary workgroup composed of representatives from 12 state health departments, the Council of State and Territorial Epidemiologists, tribal epidemiology centers, the Indian Health Service, and CDC. The workgroup assessed the burden of H1N1 influenza deaths in the AI/AN population by compiling surveillance data from the states and comparing death rates. The results indicated that, during 15 Apr to 13 Nov 2009, AI/ANs in the 12 participating states had a [pandemic] H1N1 mortality rate 4 times higher than persons in all other racial/ethnic populations combined. Reasons for this disparity in death rates are unknown and need further investigation; however, they might include a high prevalence of chronic health conditions (e.g., diabetes and asthma) among AI/ANs that predisposes them to influenza complications, poverty (e.g., poor living conditions), and delayed access to care. Efforts are needed to increase awareness among AI/ANs and their health-care providers of the potential severity of influenza and current recommendations regarding the timely use of antiviral medications. Efforts to promote the use of 2009 H1N1 influenza monovalent vaccine in AI/AN populations should be expanded. In November 2009, all state health departments were invited to participate in the workgroup investigation by providing data on influenza-related deaths among their residents. 12 states (Alabama, Alaska, Arizona, Michigan, New Mexico, North Dakota, Oklahoma, Oregon, South Dakota, Utah, Washington, and Wyoming) chose to participate, representing 50 percent of the AI/AN population in the United

States. An H1N1 death was defined as a death in a resident of a participating state reported during 15 Apr to 13 Nov 2009 with any positive result from an influenza test, including rapid enzyme immunoassay, direct or indirect influenza fluorescent antibody, real-time reverse transcription--polymerase chain reaction assay (rRT-PCR), or viral culture. Because greater than 99 percent of influenza specimens tested during the study period had been found to be H1N1, all cases with a positive influenza test were presumed to be [pandemic] H1N1 and not seasonal influenza. Race/ethnicity and influenza risk status* of decedents were determined through review of death certificates, medical records, or death investigation reports. CDC-defined groups at higher risk for influenza complications were used to classify decedents as at high risk for influenza complications. Bridged-race vintage 2008 postcensal population estimates** were used by all states to determine population data for rate calculations. Death rates by race/ethnicity were age adjusted to the 2000 U.S. standard population. Using rate ratios, AI/AN death rates were compared with death rates for all other racial/ethnic populations, including deaths in persons of unknown race. A total of 426 H1N1 deaths were reported by the 12 states during 15 Apr to 13 Nov 2009 (tabulated in the original text). 42 deaths (9.9 percent) occurred among AI/ANs, although AI/ANs make up approximately 3 percent of the total population in the 12 states. The overall AI/AN H1N1-related death rate was 3.7 per 100 000 population, compared with 0.9 per 100 000 for all other racial/ethnic populations combined, resulting in a mortality rate ratio of 4.0. Age group-specific H1N1-related death rates were 3.5 for persons aged 0 to 4 years, 1.1 for persons aged 5 to 24 years, 4.2 for persons aged 25 to 64 years, and 7.2 for persons aged 65 years or older. In all age groups, the AI/AN death rate was higher than the rate for all other racial/ethnic populations combined. Among the AI/AN deaths related to H1N1, 81.0 percent of decedents had high-risk health conditions, compared with 77.6 percent of persons in all other racial/ethnic populations combined (data tabulated in the original text). In addition, greater percentages of AI/AN decedents had asthma (31.0 percent) and diabetes (45.2 percent) than decedents in all other racial/ethnic populations combined (14.1 percent asthma and 24.0 percent diabetes).

Resources:

<http://www.cdc.gov/h1n1flu/>

<http://www.dhmh.maryland.gov/swineflu/>

NATIONAL DISEASE REPORTS

EASTERN EQUINE ENCEPHALITIS, EQUINE (NORTH CAROLINA): 17 Dec 2009, According to the county health department, 2 more horses have died in Carteret County [North Carolina, USA] due to eastern equine encephalitis (EEE) [virus] infection. The county has now seen 3 equine deaths from EEE since October [2009]. All 3 animals were located in the Newport area. With the reports, health officials are reminding area residents to take precautions to protect themselves and their horses against the rare disease. The viral illness, transmitted by some species of mosquitoes, attacks the central nervous system, causes inflammation of the brain, and can be fatal to animals and humans. Wild birds serve as reservoirs for the virus. Mosquitoes bite the birds and then can transmit the virus to humans and animals, the health department said via a news release. North Carolina averages about 1 human case of EEE and about 10 equine cases each year. It is commoner in the eastern part of the state than elsewhere in North Carolina, the health department said. About 50 per cent of human EEE cases are fatal, with young children and the elderly most at risk. Symptoms [in human beings] can develop from a few days to 2 weeks after a bite by an infected mosquito. They include rapid onset of fever and headache and can resemble a case of the flu. Survivors of EEE infections may suffer from long-term effects to the nervous system. Therapy is limited to treating the symptoms of the disease, but there is no specific cure. There is a vaccine for horses but not for humans. For people, the best defense against EEE infection is to avoid mosquito bites. Reduce time spent outdoors, particularly in early morning and early evening hours when mosquitoes are most active. Wear light-colored long pants and long-sleeved shirts and apply mosquito repellent to exposed skin. The best defense for horses is to vaccinate them against EEE. The American Academy of Equine Practitioners now recommends that EEE vaccine be given to all horses as part of a core vaccination program. Reduce mosquito-breeding areas by removing any containers that can hold water; keep gutters clean; repair leaky outdoor faucets and change the water in bird baths and pet bowls at least twice a week; use screened windows and doors and make sure screens fit tightly and are not torn; keep tight-fitting screens or lids on rain barrels. (Viral Encephalitis is listed in Category B on the CDC list of Critical Biological Agents) *Non-suspect case

BRUCELLOSIS, BOVINE (IDAHO): 15 Dec 2009, Tests have confirmed a 2nd animal positive for brucellosis in an eastern Idaho herd. The disease is highly infectious and can cause cattle to abort. Idaho State veterinarian Bill Barton said all animals in the herd have been tested and most results are back. The department and the industry take a brucellosis finding seriously as another finding in a separate herd would cause the state to lose its brucellosis-free status, wreaking havoc on cattlemen's ability to market their animals. The industry lost its brucellosis-free status in January 2006. Aggressive action saw the state regain its status in July 2007. Although another animal was found to be suspect for the disease discovered last week, further testing confirmed it was not infected. The 2 positive animals were found in a 600 head herd based in Rigby and assembled over the last couple of years, Barton said. Further testing was needed on the 1st animal, a 15 year old cow, because it was vaccinated with an older vaccine that can show a false positive with the standard blood test. "The vaccine is the best we have, but at 15 years of age, immunity is waning a little bit," Barton said. The older strain 19 vaccine has about the same efficacy as the newer RB15 vaccine [RB51. - Mod.TG], but where it's been used, epidemiologist must take a milk sample and culture the tissue for a definitive diagnosis. All animals in the herd had been vaccinated as required by the state, Barton said. The 1st positive finding came as a result of another animal from the herd testing suspect at slaughter. "All animals at the slaughter plant are inspected with a blood test," Barton said. If one shows up positive or suspect, all animals in the herd are tested. "We are continuing our investigation as rapidly as possible," he said. That

entails not only testing the herd, which is now complete, but also tracing animals to their herd of origin and testing those herds. Barton has confirmed that all animals that left the herd were sold to slaughter. That's good news in regard to any possible forward infection from the herd. The question now is whether the herds where the animals originated are infected. Barton is more of the mind that the infection came from wild elk or bison that the herd came in contact with. Brucellosis is prevalent in those wild animals in the Greater Yellowstone Area and the herd summers in the Teton Basin. Cattlemen in the West are anxiously awaiting Idaho's testing results. Brucellosis is one of a handful of bovine diseases that cause concerns when it comes to moving cattle from state to state, said Matt Byrne, vice president of the California Cattlemen's Association. California is brucellosis-free and cattle producers want it to stay that way, he said. "Hopefully we'll find that it is a localized incident and won't have an impact on California," he said. California has had its own infectious disease troubles with tuberculosis, which has infected 8 cows in the state since January 2008, according to the state's Department of Food and Agriculture. About 419 000 head of cattle have been TB tested, 2 herds depopulated and more than 8000 cattle killed as part of an ongoing investigation, the CDFA [California Department of Food and Agriculture] reports. The USDA last year [2008] stripped California of its tuberculosis-free status, causing cattle to have to be tested before they leave the state. (Brucellosis is listed in Category B on the CDC list of Critical Biological Agents) *Non-suspect case

HANTAVIRUS UPDATE 2009 (CALIFORNIA): 14 Dec 2009, Two residents of eastern Nevada County are confirmed to have contracted [a] hantavirus [infection], a sometimes-deadly disease [virus] passed to humans by rodents. The 2 residents have since recovered, a Nevada County Environmental Health Department news release states. Since the virus was identified in 1993, 48 cases have been reported in California and 465 cases [throughout the United States]. About 40 per cent of the state's cases have been fatal, the environmental health department states. State and county officials are investigating how the 2 most recent flare-ups [cases] occurred. Hantavirus[es] are contracted through contact with urine, droppings or saliva of wild mice, primarily deer mice [*Peromyscus maniculatus*]. The illness begins with fever, headache, and muscle ache. Those symptoms progress rapidly to severe breathing difficulty. The department provides precautionary tips: avoid areas where wild rodents are likely to be present; spray diluted bleach on areas contaminated with rodent droppings and urine. Wear plastic gloves and use a wet sponge or mop to clean contaminated area; do not touch live rodents and wear gloves when handling dead ones. (Emerging Infectious Diseases are listed in Category C on the CDC list of Critical Biological Agents) *Non-suspect case

INTERNATIONAL DISEASE REPORTS

Q FEVER (NETHERLANDS): 19 Dec 2009, Minister of Agriculture, Nature and Food Quality (LNV) Gerda Verburg has decided, in relation to Q fever, to declare a full ban on the transportation of dairy goats and dairy sheep. Until now, all milk-producing sheep and goat farms, including more than 50 animals, have been allowed to introduce vaccinated animals. In line with the wish of the House [Parliament], Minister Verburg has now prohibited the introduction of animals into all milk-producing sheep and goat farms. This applies to both vaccinated and non-vaccinated animals. Starting Fri 18 Dec 2009, 0700 pm, until 1 Jul 2010, transportation of such animals is allowed only to fattening farms/holdings or directly to slaughterhouses. (Q fever is listed in Category B on the CDC list of Critical Biological Agents) *Non-suspect case

ANTHRAX, HUMAN (UNITED KINGDOM: SCOTLAND): 19 Dec 2009, Investigations into the presence of anthrax in infections sustained by drug injecting heroin users in Glasgow are ongoing. At this afternoon's meeting of the outbreak control team (OCT) it was confirmed that public health specialists and other health care professionals across the country are continuing to review recent cases of injecting drug users who presented with soft tissue infections or other conditions. So far no new potential cases have been found. Dr Syed Ahmed, consultant in public health medicine, said: "Drug injecting is extremely risky and dangerous. The health service deals continually with people who have suffered very serious infections due to dirty needles or contaminated drugs. The possible presence of a batch of heroin contaminated with anthrax makes drug injecting even riskier and even more dangerous. Once again, I urge injecting drug users to be on their guard and to seek urgent medical advice if they have experienced an infection or other serious symptoms." The OCT was also told that the female patient confirmed with the presence of anthrax and undergoing treatment at the Victoria Infirmary remained stable. The male patient undergoing intensive care at Glasgow Royal Infirmary also remains stable. The postmortem results on the man who died at the Victoria Infirmary on 16 Dec 2009 are expected next week. (Anthrax is listed in Category A on the CDC list of Critical Biological Agents) *Non-suspect case

JAPANESE ENCEPHALITIS (INDIA): 14 Dec 2009, The toll due to different types of encephalitis has mounted to 560 this year [2009] in eastern Uttar Pradesh as one more child succumbed to the brain fever, an official said today [13 Dec 2009]. Additional director (health) LP Rawat said 5 new patients with symptoms of acute encephalitis syndrome and Japanese encephalitis have been admitted to BRD Medical College Hospital and government hospitals of the adjoining districts. "5 deaths have occurred during the past one week," he said, adding that a child patient from Bihar died last night [12 Dec 2009]. He said 63 patients are undergoing treatment at BRD Medical College while 5 are being treated at other government hospitals of the region. (Viral Encephalitis is listed in Category B on the CDC list of Critical Biological Agents) *Non-suspect case

Q FEVER, ANIMALS (BELGIUM): 13 Dec 2009, Q fever, reported on about 55 goat farms in the Netherlands has now also been reported in Belgium. In the Netherlands, 6 people have died from the disease. The authorities in Belgium say Q fever does not pose a major threat in Belgium, which has a much smaller goat population. The Federal Food Safety Agency says 2 Belgian farms have been infected. According to the FASFC, the Federal Agency for the Safety of the Food Chain, 2 farms have goats that are infected with Q fever: one in Flanders and one in Wallonia. Federal Health Minister Laurette Onkelinx does not think the situation warrants extra measures here. This year [2009], there have been 36 cases of people contracting Q fever in Belgium (mostly in Flanders). Q

fever is a rare bacterial disease that can't be spread between people and usually causes only flu-like symptoms. Many animals can carry the bacteria, but contact with infected goats is believed to be the main source of human infections. Most humans are infected between February and May, when goats and sheep give birth. Flanders is planning to take some general measures. Following a meeting on Thursday [10 Dec 2009] between the government, farm organizations and the union of goat farmers, Flemish Prime Minister Kris Peeters stressed that the situation in Belgium is under control. However, it was decided that the situation would be monitored more closely. It was also decided to speed up work on the new vaccination now in the making. "It was agreed that the vaccination will be prepared as soon as possible and in sufficient quantities," said PM Peeters. The vaccination must be prepared before the next birthing period. It was also decided to keep in close contact with the Dutch authorities regarding the evolution of Q fever. Transport of goats or equipment used for goats and goats' milk between the Netherlands and Flanders will also be monitored very closely. (Q fever is listed in Category B on the CDC list of Critical Biological Agents) *Non-suspect case

OTHER RESOURCES AND ARTICLES OF INTEREST

More information concerning Public Health and Emergency Preparedness can be found at the Office of Preparedness and Response website: <http://preparedness.dhmd.maryland.gov/>

Maryland's Resident Influenza Tracking System: www.tinyurl.com/flu-enroll

NOTE: This weekly review is a compilation of data from various surveillance systems, interpreted with a focus on a potential BT event. It is not meant to be inclusive of all epidemiology data available, nor is it meant to imply that every activity reported is a definitive BT event. International reports of outbreaks due to organisms on the CDC Critical Biological Agent list will also be reported. While not "secure", please handle this information in a professional manner. Please feel free to distribute within your organization, as you feel appropriate, to other professional staff involved in emergency preparedness and infection control.

For questions about the content of this review or if you have received this and do not wish to receive these weekly notices, please e-mail me. If you have information that is pertinent to this notification process, please send it to me to be included in the routine report.

Sadia Aslam, MPH
Epidemiologist
Office of Preparedness and Response
Maryland Department of Health & Mental Hygiene
300 W. Preston Street, Suite 202
Baltimore, MD 21201
Office: 410-767-2074
Fax: 410-333-5000
Email: SAslam@dhmd.maryland.gov